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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/919,105
Filing Date: July 31, 2001
Appellant(s): MALMBORG, JESSICA

Steven H. Noll (Reg. 28,982)
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6-06-2005.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct. For the above reasons, it is believed that the rejections should be sustained.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

The rejection of claims 1-16 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

However, for purposes of appeal, groupings as the applicant presented them in the ARGUMENT / ISSUES TO BE REVIEWED sections of the Brief are presented below:

Appellant's brief grouped claims 1-12, 14, and 15.

Appellant's brief grouped claims 13 and 16.

These statements in the brief are not agreed with because claims 13 and 16 pertain to different subject matter in different branches of the claim tree.

(8) *ClaimsAppealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

4,675,147	Schaefer et al.	6-1987
6,343,508	Feller	2-2002
6,211,887	Meier et al.	4-2001

(10) *Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The examiner agrees that sections are not limited in size by adjoining measures, however there is not support in the specification or the drawing, and in fact they teach against the sectors being displayed without inter-relation, the sections are displayed with relation to one another by being uniformly varied from the same regular polygon, having a predetermined radial size.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 14 recites the limitation "said region polygon" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the said regular polygon and said at least one additional regular polygon are said to be displayed in a small and large format. This would imply that the same element, and not a duplicate thereof, can be displayed in a smaller format and a larger format simultaneously.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schaefer et al., Patent #4,675,147, hereinafter Schaefer and Feller, Patent #6,343,508.

With regard to claim 1, Schaefer teaches a interface for a medical apparatus (see column 2, lines 53-58), a display screen and memory for storing and displaying at least two parameters (see column 3, lines 1-3 and column 4, lines 11-24), a controlling unit for displaying a representative display of each parameter as a sector in a regular polygon, and varying the display based on a difference from the normal (see column 2, lines 25-29 and column 3, lines 16-41). Schaefer further teaches sectors that have a constant angular size (see figures 1 and 5) and a regular polygon having a predetermined size representing normal data (see column 2, lines 25-29) where deviations are relative to the normal (see column 2, lines 25-41). Although Schaefer teaches a display of sectors of readings of data relative to a normal, Schaefer doesn't specifically teach sectors being displayed without inter-relation to each other or uniformly varying a radial size. Feller teaches a display of sectors in a graph view that more closely resembles that as taught by the applicant (see column 1, line 40 through column 2, line 7, column 2, lines 38-49, and in figures 1-3). Feller teaches, in column 2,

line 45-48 the display of figure 3, straight lines are used to delaminate sectors, and Feller teaches, in column 1, lines 44-50 and figure 8, sectors being displayed independent of neighboring sectors, and uniformly varying the radial size of the sectors. It would have been obvious to one of ordinary skill in the art, having the teachings of Schaefer and Feller before him at the time the invention was made to modify the display of Schaefer to more closely resemble the display of Feller. One would have been motivated to make such a combination because the systems are both teaching a graphical display of multiple components so as to allow the user to see deviation from the normal by a morphing of the shape.

With regard to claim 2, which teaches varying the appearance only if a difference between the normal data and the signal data exceeds a predetermined threshold value, Schaefer further teaches, in column 4, lines 11-24 and in column 9, lines 39-53, a color change associated with the status exceeding some predefined value.

With regard to claim 3, which teaches varying the area of said sector to produce a clear visual distinction between the sector and adjacent sectors, Schaefer further teaches, in column 4, lines 3-24 and in figures 5 and 6, the deviation of area producing a visual distinction between other sectors. Feller further teaches, in column 1, lines 44-50 and figure 8, varying area by increasing or decreasing radial size of the sectors.

With regard to claim 4, which teaches increasing the area if the signal data is larger than the normal data, and decreasing the area if signal data is less than normal data, Schaefer further teaches, in column 16, lines 25-51 and in figure 8 modifying the polygon in response to changes in the status signals. Feller further teaches, in column

1, lines 44-50 and figure 8, varying area by increasing or decreasing radial size of the sectors.

With regard to claim 5, which teaches generating an inner regular polygon representing a lower alarm limit for at least two parameters, Schaefer further teaches, in column 2, lines 36-41, inner regular polygon representing a lower alarm limit and in column 11, lines 54-57, alarm limits.

With regard to claim 6, which teaches the control unit varying the sector in steps toward said lower alarm limit, Feller further teaches, in column 1, line 50 through column 2, line 7, measurements varying in steps toward some minimum or maximum limit value. Feller further teaches, in column 1, lines 44-50 and figure 8, varying area by increasing or decreasing radial size of the sectors.

With regard to claim 7, which teaches the control unit varying the sector in two steps, Feller further teaches, in column 1, line 50 through column 2, line 7, measurements varying in steps toward some minimum or maximum limit value. Where it would be obvious to vary in two steps. Feller further teaches, in column 1, lines 44-50 and figure 8, varying area by increasing or decreasing radial size of the sectors.

With regard to claim 8, which teaches generating an outer regular polygon representing a upper alarm limit for at least two parameters, Schaefer further teaches, in column 2, lines 36-41, outer regular polygon representing a upper alarm limit and in column 11, lines 54-57, alarm limits.

With regard to claim 9, which teaches the control unit varying the sector in steps toward the upper alarm limit, Feller further teaches, in column 1, line 50 through column

2, line 7, measurements varying in steps toward some minimum or maximum limit value.

With regard to claim 10, which teaches the control unit varying the sector in two steps, Feller further teaches, in column 1, line 50 through column 2, line 7, measurements varying in steps toward some minimum or maximum limit value. Where it would be obvious to vary in two steps.

With regard to claim 11, which teaches generating sectors in color, and varying color dependent on the result of a comparison, Schaefer further teaches, in column 4, lines 11-24 and in column 9, lines 39-53, using colors to differentiate sectors and having a color change in response to exceeding some limit.

With regard to claim 12, which teaches the generating a regular polygon as a circle, Feller further teaches, in figures 1-3, a representation of the graph using arcs.

With regard to claim 14, which teaches the control unit generating at least one additional regular polygon on the display, Schaefer further teaches, in column 2, lines 25-41, the generation of a normal polygon which remains on the screen along with the measured polygon, which would be normal given uniform increase of monitored values.

With regard to claim 15, which teaches the stacking of polygons, where the one with largest deviation is on top of the stack, Schaefer teaches, in column 2, lines 25-41 and in figure 5, the stacking of polygons where the normal appears in a dotted line state, the other that is produced by measured values appears in a dark form over the other.

Claims 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schaefer, Feller, and Meier et al., Patent #6,211,887, hereinafter Meier.

With regard to claim 13, Schaefer and Feller teach the system for providing a display of medical measurements in the form of sectors in a polar chart using polygons to connect measurements, as rejected supra. Schaefer and Feller, however, don't teach a touch sensitive surface for accessing more detailed information with respect to the touched parameter. Meier teaches a system of viewing multiple measures on a polar chart and connecting measures with a polygon, similar to that of Schaefer and Feller, but further teaches, in column 2, lines 45-50 and column 3, lines 32-40, a system where a touch screen is present where selection can be made on the screen for entry, modification, and storage of record data. It would have been obvious to one of ordinary skill in the art, having the teachings of Schaefer, Feller, and Meier before him at the time the invention was made to modify the display of Schaefer and Feller to include the touch sensitive information providing display of Meier. One would have been motivated to make such a combination because touch sensitive displays provide an intuitive means of selecting items on a display device.

With regard to claim 16, Schaefer and Feller teach the system for providing a display of medical measurements in the form of sectors in a polar chart using polygons to connect measurements, as rejected supra. Schaefer and Feller, however, don't teach the display of the multiple polygons in a small format, where at least one is displayed in a larger format. Meier teaches a system of viewing multiple measures on a polar chart and connecting measures with a polygon, similar to that of Schaefer and

Feller, but further teaches, in column 5, lines 10-40, a system the hash marks can be changed so as to change the size of the respective polygon. It would have been obvious to one of ordinary skill in the art, having the teachings of Schaefer, Feller, and Meier before him at the time the invention was made to modify the display of Schaefer and Feller to include the sized modification means of Meier. One would have been motivated to make such a combination because displaying some polygons in a smaller format can allow for more polygons to be displayed and free up display space for other information.

This rejection is set forth in a prior Office Action, mailed on 1-13-2005.

(11) Response to Arguments

35 USC § 112 Rejection of Claim 1:

From pages 9-11 of the Appeal Brief, the Appellant argues that the office has made an improper 35 USC § 112 Rejection, of the added limitation that “said sectors are displayed without inter-relation to each other”.

The examiner respectfully contends that the added limitation that “said sectors are displayed without inter-relation to each other”, was added in an attempt to overcome the prior art of record (see page 9, line 20 of the appeal brief), but is not fully supported by the specification nor the drawings. The specification actually teaches away from a display of sector without inter-relation to each other, in showing in figures 2-6 sectors in

a circular/polygonal graph where if a sectors angular size effects the other sectors angular size by limiting the total maximum angular sum to be 360 degrees. Furthermore the claim itself teaches "uniformly varying a radial size" from a predetermined sized represented by the normal polygon where the sections are displayed with relation to one another by being uniformly varied from the same regular polygon. Uniformly varying a group of elements from the same normal will provide a common relation between that group of elements. Furthermore, the size of each sector is also dependent on the total number of sections of the polygon.

From page 9, lines 15-19 of the Appeal Brief, the Appellant argues that "the use of the phrase "said sectors are displayed without inter-relation to each other" means... "that adjustment of one of the sectors does not automatically or necessarily result in a connected adjustment or change in another of the sectors.

The examiner respectfully contends that these two statements have drastically different meanings. Since the interpretation of the limitation is the basis for the arguments and it has been admitted by the applicant that "the term 'without inter-relation' is not explicitly used in the present specification" and that "There is no description anywhere in the specification describing any type of 'inter-relation' between two or more sectors" (see page 11, lines 1-7 of the Appeal Brief), the Examiner's interpretation is now given. The Examiner asserts the limitation of 'said sectors are displayed without inter-relation to each other' limits the display to not show any type of relationship between sectors. This limits the sectors from having common axes, origins, uniform variations, etc.

As stated in the eighth paragraph of MPEP 2101[R2].II.C.,

"Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023,1027-28 (Fed. Cir. 1997)."

Based on the interpretation of the claim limitations being argued, the Examiner does not see how it would be possible to display a diagram, as described by the applicants specification without sectors being related of inter-related in some manner to one another.

It can be seen from the Applicant's Brief that all of the limitations of the claimed invention are taught in at least one of Schaefer, Feller, and Meier; and accordingly direct all arguments to the combination of the prior art of record.

Group I:

With respect to the group of claims including Claims 1-12, 14, and 15, the Appellant's arguments are focused on the combination of the Schaefer and Feller references. The argument is:

If the Schaefer et al reference were modified, even conceptually, to have an appearance close to that of the Feller display, this would necessarily result

in a completely different manner of displaying the information, and would not display the same information with the same level of clarity, and interrelation between adjacent sectors, as disclosed in the Schaefer et al reference.

Schaefer teaches a system that requires presentation of hundreds of readings where the invention is provided to ease the load on a user in making decisions based on the information (see column 1, lines 22-30) and such displays for use in the medical field to provide assistance in diagnosis by displaying simultaneously several physiological parameters, including temperature, blood pressure, heart rate, etc. (see column 2, lines 53-58).

Likewise Feller teaches, a system that requires presentation of a large number of values which are stated to become complicated and unwieldy, where the invention is provided to ease the load on a user allowing them to differentiate between critical and less critical parameters, at a glance (see column 1, lines 23-39). Both of these inventions are directed toward the same field of invention, achieving the same goals, and going about it in a similar manner. They both provide a graphical circular/polygonal display, for use in providing the user with an easily identifiable means of determining when a problem exists in the plurality of measures. Both references teach a user determining that a problem exists by noticing an irregularity in the shape of the perimeter of the measures, caused by a value being at a different radius (see column 3, lines 45-49 of Schaefer and column 1, lines 60-62 of Feller).

In response to applicant's argument that Schaefer and Feller are nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, both references are drawn to the display of a graphical circular/polygonal display, for use in providing the user with an easily identifiable means of determining when a problem exists in the plurality of measures. Furthermore, the references are shown to share a common field given the fact that both of the references are cross-referenced in class 345, subclass 440 of the Manual of Patent Classification.

The examiner will now address the individual arguments and statements made by the Appellant.

From page 12 of the Appeal Brief, from the third paragraph, the Appellant argues "*If the Schaefer et al reference were modified, even conceptually, to have an appearance close to that of the Feller display, this would necessarily result in a completely different manner of displaying the information, and would not display the same information with the same level of clarity, and inter-relation between adjacent sectors, as disclosed in the Schaefer et al reference*".

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by

combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the examiner respectfully contends that Schaefer would only be different in the sense that it would show the measure of a value radially between axes instead of upon the axes. Schaefer would still show a relationship between sectors as Feller shows a relationship between adjacent sectors. This can be seen by them both showing a plurality of measures, radiating from a center of the diagram, one can clearly see from looking at figure 4 of Feller a relationship between two neighboring segments, segment 36 has a higher measure than 31 (this provides an indication that one of the values is a little out of the normal). Schaefer's connecting of radially measured values is an alternate means of showing that one or more of the measured values is out of proportion with the others, but does not depart from the concept of a shape that is distorted should a value depart from the norm. Furthermore, both references are drawn to the display of a graphical circular/polygonal display, for use in providing the user with an easily identifiable means of determining when a problem exists in the plurality of measures. Additionally, the references are shown to share a common field given the fact that both of the references are cross-referenced in 345/440.

From pages 13 of the Appeal Brief, from the first and second paragraphs, the Appellant argues that since there is no teaching in Feller of a "normal" level,

one would not be motivated to combine the references, as the combination would preclude display of the same information in the same manner.

The examiner respectfully contends that Feller does show in column 1, lines 60-61 that values that lie on the same radius are desired values, and as the applicant admits on page 13, lines 8 and 9 of the Appeal Brief, Feller displays "a circle of a constant radius", this provides the user with an indication of what a normal reading should look like, circular, compared to an abnormal rating where there would be segments jetting out from the constant radius of the desired circle. Feller chooses to use a zero point common to all measures (similar to the normal point shared by all measures of Schaefer), to initiate measurement.

From page 13 of the Appeal Brief, from the second paragraph, the Appellant argues that "It is important in the Schaefer et al display that the aforementioned distortions of the sector shapes occur with respect to specific values along the two axes defining each sector. This is not able to be accomplished in the Feller reference, wherein the radial size of the sector is increased or decreased without a relationship to specific values along the respective axes defining the sector."

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the

references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the examiner respectfully contends that Schaefer would only be different in the sense that it would show the measure of a value radially between axes instead of upon the axes. Schaefer would still show a relationship between sectors as Feller shows a relationship between adjacent sectors. This can be seen by them both showing a plurality of measures, radiating from a center of the diagram, one can clearly see from looking at figure 4 of Feller a relationship between two neighboring segments, segment 36 has a higher measure than 31 (this provides an indication that one of the values is a little out of the normal).

From page 14 of the Appeal Brief, from the second paragraph, the Appellant argues that “independent claim 1 has been amended to make clear that the sectors are displayed without inter-relation to each other, further distinguishing the subject matter of claim 1 over the teachings of Schaefer et al”.

The examiner respectfully contends that though the combination with the Feller reference has been shown above, where Feller teaches elements “without sectors having common connections” (see figure 3), and the fact that the application doesn’t have support for this limitation, the Examiner would like to further point out that Both Schaefer, Feller, and the present Application have sectors that are displayed with relation to one another. The present application has sectors that uniformly vary from

the same regular polygon (see claim 1). This claim itself teaches directly away from "sectors are displayed without inter-relation to each other". At most, the Schaefer reference displays sectors that show a connection between two adjacent radial measures of a plurality of measures.

Group II:

With respect to the group of claims including Claims 13 and 16, the Appellant's arguments are focused on the examiners use of the Meier reference. The Appellant, however doesn't argue claim 13, and instead argues claim 15, which isn't even in this grouping, nor is it rejected over Meier. The applicant further hasn't addressed a pending 35 U.S.C. 112 rejection on claim 16.

From page 15 of the Appeal Brief, from the fifth paragraph, the Appellant argues "there is no teaching in Meier et al reference that the top most displayed polygon represents the largest deviation from normal data".

The examiner respectfully contends that Meier is not relied upon for the teaching of this limitation. Schaefer teaches, in column 2, lines 25-41 and in figure 5, the stacking of polygons where the normal appears in a dotted line state, the other that is produced by measured values appears in a dark form over the other. Schaefer teaches, that ONE is the "normal" in <dotted lines>, and TWO is the "measured" shown in <dark lines> overlaying ONE.

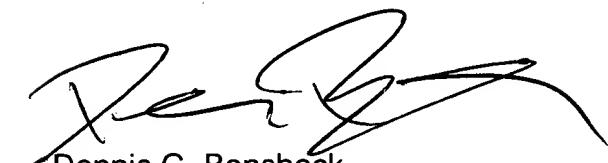
From page 16 of the Appeal Brief, from the second paragraph, the Appellant argues "there is no teaching in Meier et al reference, however, that multiple polygons are, or even can be, displayed simultaneously in different size formats."

The examiner respectfully contends that Meier, in column 5, lines 10-40, a system the hash marks can be changed so as to change the size of the respective polygon. This would allow for the polygons of the system to be displayed in a different size format.

The examiner further respectfully submits that the claim is not limiting to having two different simultaneous displays at different sizes, stating that the regular polygon can be both in small and large formats (where one element obviously can't be in a large and small format simultaneously). This was pointed out in a 112 rejection that seems to have been ignored, or at least not responded to in the Appeal Brief.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



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August 15, 2005



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